Candidate Number.....

PRESIDENT'S OFFICE - RALG

ROMBO DISTRICT EXAMINATION SYNDICATE (RODES)

FORM TWO MOCK ASSESSMENT EXAMINATION

034 **BASIC MATHEMATICS**

Time 2.30 Hours **August, 2024**

INSTRUCTIONS

1. This paper consists of **Ten (10) Compulsory Questions**, each question carries **ten (10) marks**
2. Show clearly all the working and answer in the space provided
3. All writing must be in blue or black ink except drawing which must be in pencil
4. **NECTA mathematic tables**, geometric instruments and graph paper may be used where necessary
5. Cellular phones and any unauthorized materials are not allowed in the examination room.
6. Write your assessment number at the top of write corner of every page.

FOR ASSESSOR'S USE ONLY		
QUESTION NUMBER	**SCORE**	**ASSESSOR'S INITIALS**
1		
2		
3		
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8		
9		
10		
11		
12		
13		
14		
TOTAL		
CHECKER'S INITIALS		

1. a) Amina, Juma and Ally are training themselves about how to lap in their music. Amina, laps once every 9 minutes, Juma laps once every 15 minutes, and Ally laps every after 20 minutes. How long will it take for them to lap together?

b) The total mass of cotton harvested in Maswa district was $17\ 816\ 273\ kg$. Round off this Mass to the nearest;

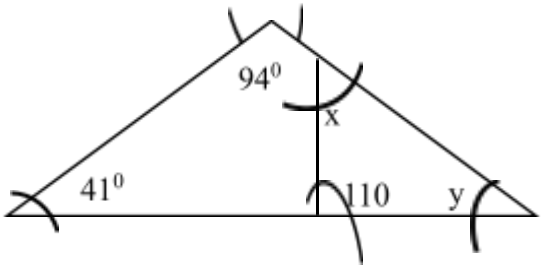
i. Millions of kilograms

ii. Thousands of kilograms

2. a) Geofrey spent $\frac{5}{9}$ of his income and remained with 88200 Tanzania shillings what was his income?

b) Which one is greater between $\frac{15}{24}$ and $\frac{7}{72}$? Show how you arrived to your answer

3. a) Calculate the size of angle x and y in the following figure



b) The floor of a room is a square of length 5 metres. Find its Perimeter and Area

4. a) Evaluate $672^2 - 328^2$

b) Given that m*n = $\frac{m-n}{m+n}$ find (3 *2)

c) Solve $-2y^2 + 7y - 6 = 0$ by using formula

5. a) If a:b= 2:3 and b:c=5:6 find value of a:c

b) A shopkeeper bought a radio for Tsh 80,000 and sold it a profit of 20%. What were the profit and selling price?

6. a) Find the image of point $P(3,\ 1)$ when it is;

   i. Reflected in the $x - axis$

   ii. Reflected in the line $y = x$

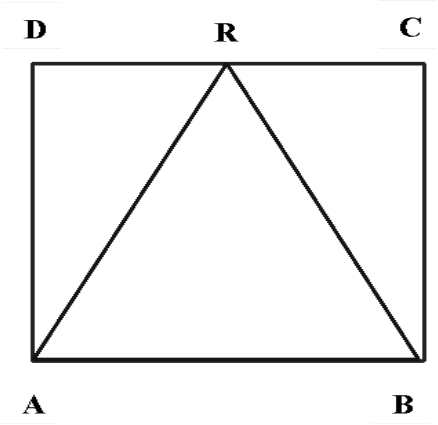
b) Find the equation of the straight line in form of $y = mx + c$ passing through the point

$P(-\ 4,\ 5)$ and $Q(-\ 2,\ 1)$

7. a) solve for x in $\left(\frac{3}{5}\right)^{x-6} = \left(\frac{25}{9}\right)^{x}$

b) i). Given $log3 = 0.4771$ and log $log\ 5 = 0.6990$. Evaluate $log45$

8. a) if ABCD is a square and $\overline{AR} = \overline{BR}$ prove that R is the midpoint of $\overline{DC}$



b) Given that T = $2\pi\sqrt{\frac{l}{g}}$ make "L" the subject of the formula

9. a) Find the exact value of $2\sin 60^0 + \text{Cos } 30^0$

   b) The adjacent sides of right angled triangle have lengths 5cm and 12cm .Find the length of the hypotenuse.

10. a) In a school of 160 students, 50 have bread for breakfast and 80 have sweet potatoes. How many students have neither bread nor potatoes for breakfast assuming that none takes both bread and sweet potatoes? Use venn diagram

b)). The following table shows marks for a form two Basic mathematics monthly test

Mark (%)	25	35	40	50	60	65	70	75	80
Number of students	2	3	5	7	11	7	4	2	1

i. What is the lowest mark?

ii. Which mark is scored by the greatest number of students?

iii. If 60% is the pass mark in the test, how many students failed?

iv. How many students are in form two class?